



- 3 -

Wang *et al.*
Appl. No. 10/015,887
Atty. Docket: 1875.1260001

Amendments to the Claims

1. (Canceled)

2. (Currently Amended) A differential amplifier, comprising:

a differential input capable of receiving a differential signal;

a first differential pair coupled to said differential input;

a second differential pair, coupled to said differential input, and connected in parallel with said first differential pair at a differential output;

a differential offset circuit, coupled within a differential signal path between said differential input and said second differential pair, and capable of level shifting said differential signal from a first level to a second level; and

a differential switch circuit, coupled to said first differential pair and said second differential pair, and capable of controlling a first current flow to said first differential pair and a second current flow to said second differential pair.

3. (Canceled)

4. (Canceled)

5. (Currently Amended) A differential amplifier, comprising:

a differential input capable of receiving a differential signal;

a first differential pair coupled to said differential input;

a second differential pair, coupled to said differential input, and connected in parallel with said first differential pair at a differential output; ~~and~~

a differential switch circuit, coupled outside a differential signal path to said first differential pair and outside said differential signal path to said second differential pair, and capable of controlling a first current flow to said first differential pair and a second current flow to said second differential ~~pair~~; pair; and

a differential offset circuit, coupled between said differential input and said second differential pair, and capable of level shifting said differential input signal from a first level to a second level.

6. (Canceled)

³ ~~7.~~ (Original) The differential amplifier of claim ² ~~5~~, wherein said differential switch circuit comprises:

^{PN} a first switch MOSFET coupled between said first differential pair and a current source; and

a second switch MOSFET coupled between said second differential pair and said current source.

8. (Canceled)

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⁴ ~~9.~~ (Currently Amended) The differential amplifier of claim ~~8~~ ² ~~5~~, wherein said differential switch circuit changes said first current flow relative to said second current flow, based on a

comparison between a common mode voltage of said differential input signal and a reference voltage.

5 10. (Currently Amended) The differential amplifier of claim 8², wherein said differential switch circuit increases said first current flow relative to said second current flow, when a common mode voltage of said differential input signal approaches said first power supply voltage.

PN 6 11. (Currently Amended) The differential amplifier of claim 8², wherein said differential switch circuit decreases said first current flow relative to said second current flow, when a common mode voltage of said differential input signal approaches said second power supply voltage.

12-18. (Canceled)

7 19. (Currently Amended) A method of extending an input signal range of a component that receives the an input signal, comprising the steps of:

- (1) level shifting a voltage of the input signal;
- (2) processing said level shifted voltage within the component; and
- (3) selecting a subcomponent, from a plurality of subcomponents within the component, to process said level shifted ~~voltage~~; voltage;

wherein the level shifting is performed by a first circuit within a signal path of the input signal; and

wherein the selecting is performed by a second circuit outside the signal path of the input signal.

8 ~~20~~. (Currently Amended) A method of extending an input signal range of a component that receives the an input signal, comprising the steps of:

- (1) level shifting a voltage of the input signal;
- (2) processing said level shifted voltage within the component; and
- (3) responding to a comparison between a common mode voltage of the input signal and a reference voltage to select a subcomponent from a plurality of subcomponents within the component to process said level shifted ~~voltage~~ voltage;

PN wherein the level shifting is performed by a first circuit within a signal path of the input signal; and

wherein the selecting is performed by a second circuit outside the signal path of the input signal.

9 ~~21~~. (Previously Presented) The method of claim ⁷~~19~~, wherein step (2) comprises the step of:
amplifying said level shifted voltage within the component.

This listing of claims will replace all prior versions, and listings of claims in the application.